The challenges and promises of blood engineered from human pluripotent stem cells.

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Public Summary:
The concept that stem cells can be used to replace and regenerate tissue was founded over half a century ago using hematopoietic stem cells in the clinical field of bone marrow transplantation. The development of human embryonic stem cell lines and patient-specific induced pluripotent stem cells has the potential to overcome the problem presented by shortages of immunologically compatible hematopoietic stem cell donors. This review summarizes the current advances made and limitations to be overcome in order to realize the full potential of engineering blood from pluripotent stem cells for clinical use.

Scientific Abstract:
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